If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match.
The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.

C-A OPERATIONS PROCEDURES MANUAL

5.24 AGS Beam Inhibit System Checkout

Text Pages 2 through 5

Attachments

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Approved: _____***Signature on File***_____ _____
Collider-Accelerator Department Chairman Date

P. Sampson

5.24 AGS Beam Inhibit System Checkout

1. Purpose

The purpose of this procedure is to provide Main Control Room (MCR) operators with instructions for checking out the AGS Beam Inhibit System (BIS).

2. Responsibilities

2.1 The MCR operators are responsible for executing this procedure when instructed to do so.

2.2 The Operations Coordinator (OC) is responsible for insuring the accurate execution of this procedure.

2.3 The OC shall initiate corrective actions to problems encountered during execution. These include:

2.3.1 Informing the appropriate systems specialist of problems,

2.3.2 logging problems in the OC Log,

2.3.3 editing the attachments of this procedure when necessary to reflect any special situations or modifications, and

2.3.4 signing the attachment of this procedure when completed.

3. Prerequisites

3.1 The AGS Main Magnet has been checked out and is pulsing.
3.2 The AGS RF system checkout has been completed (OPM 5.23.b).

3.2.1 RF cavities are sweeping with Gap volts present.

3.3 AGS D.C. bumps have been checked out and are pulsing.

4. Precautions

4.1 MCR operations will follow all applicable operational safety precautions while completing this procedure.

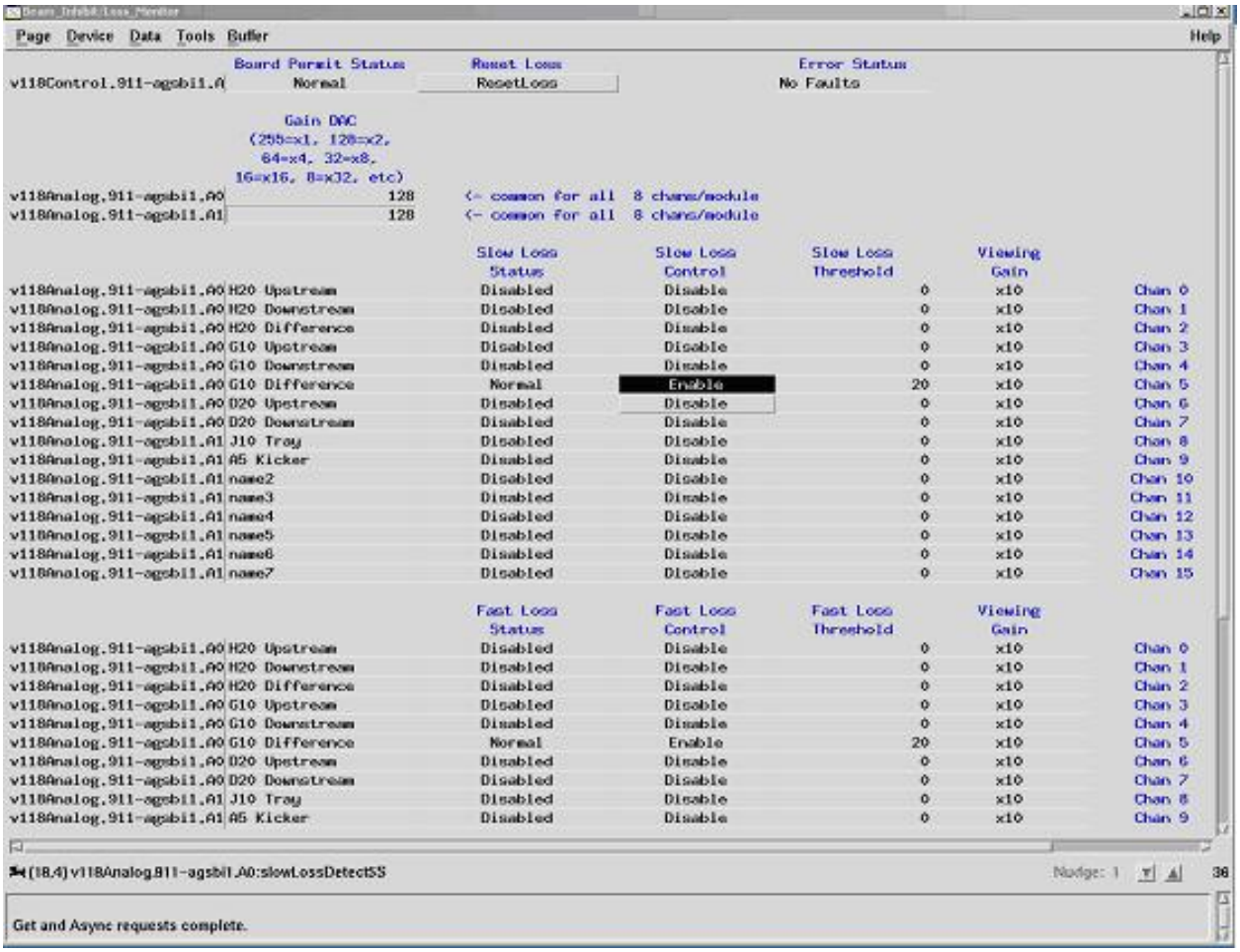
5. Procedure

The AGS beam Inhibit system is designed to protect extraction equipment, namely the H20 septum and or the G10 kicker.

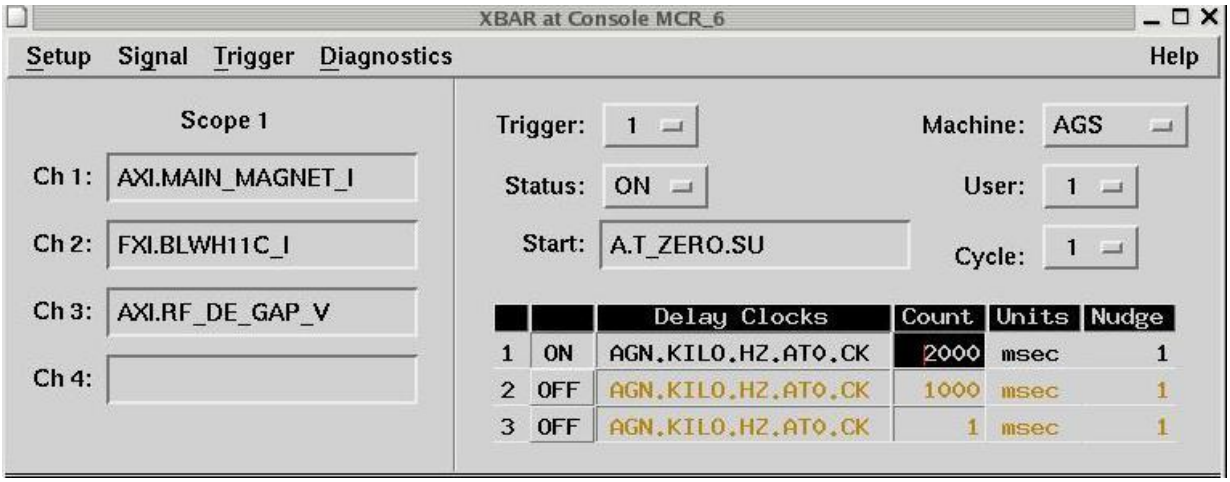
The system achieves its goal by turning off some systems while modifying others.

5.1 The MCR Group Leader, or Deputy Group Leader, will determine which inputs will be relevant for each run.

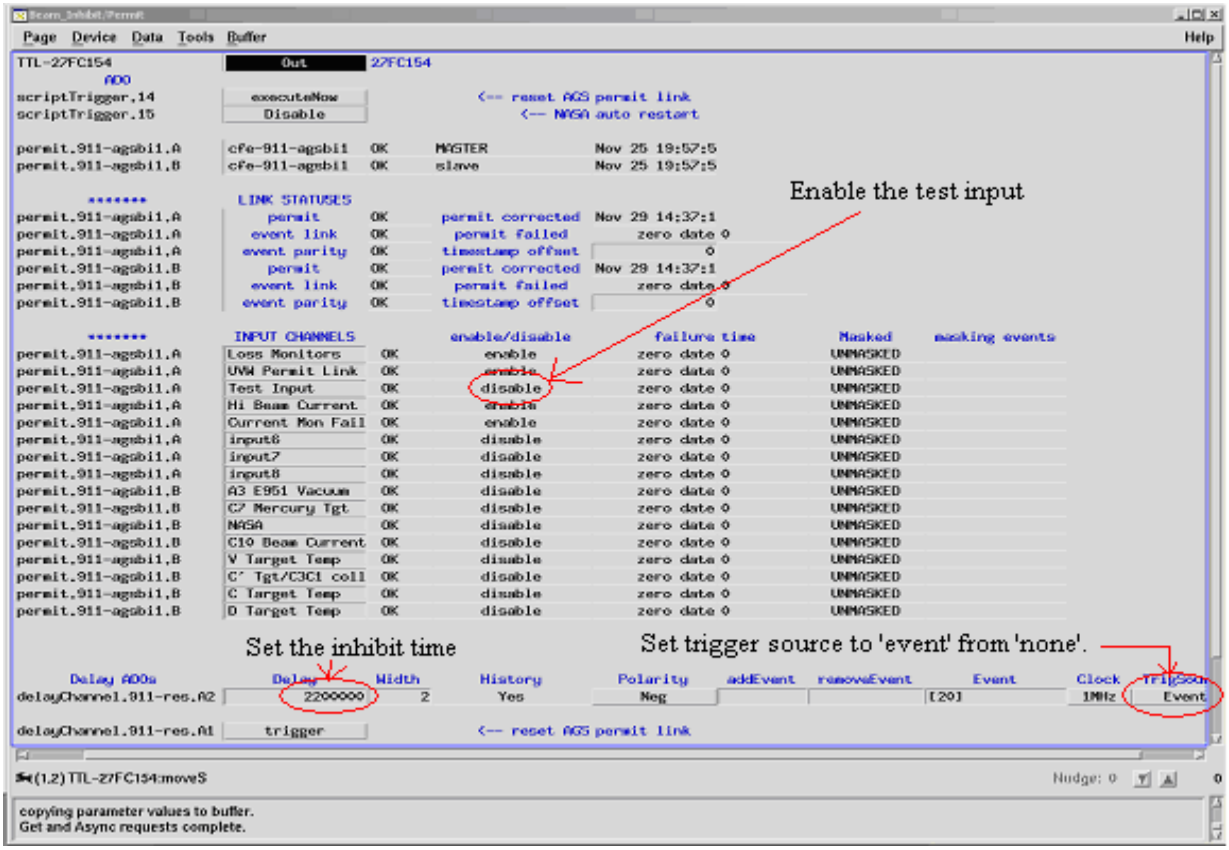
5.1.1 Enable each of these inputs on the pet page as illustrated below. Remember that the cell must be set as ‘editable’ to change their state.



5.1.2 Set up an oscilloscope as depicted below:



5.1.3 Set the source trigger to 'event' from 'none' and set a time (in usec) for the inhibit to occur during AGS flattop.



5.1.4 Enable the test input and observe that the following occurs:

5.1.4.1 The Extraction bumps turn off at the time of the inhibit, and pulse normally on subsequent cycles.

5.1.4.2 The AGS main magnet slope becomes positive at the time of the inhibit, remains so until the end of 'Flattop', then pulses normally on subsequent pulses.

5.1.4.3 The RF voltage turns off at the time of and remains off until the inhibit is reset.

5.1.4.3.1 Reset the inhibit to verify RF turns on.

5.1.5 Obtain images of the power supply/magnet response to the inhibits as well as the pet pages showing the inhibit input status and record them in the checkout record.

5.1.6 Check that the Faraday cup 27FC154 inserts when an inhibit occurs and retracts when the inhibit is cleared.

6. Documentation

6.1 Signed Hardcopy of the Scope picture showing both normal and inhibited states will be held in a binder in the MCR and contains all of the completed work as well as a list of problems encountered.

6.2 The OC will report progress made for each shift to the next shift by documentation in the OC Log.

7. References

None

8. Attachments

None